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| 09/992,684 | 11/19/2001 | Corey M. Grove | DAM 557-01 | 5881 |

24211 7590 10/17/2002

US ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
OFFICE OF THE CHIEF COUNSEL/IP TEAM (BLDG E4435)
5183 BLACKHAWK ROAD
APG, MD 21010-5424

EXAMINER

MENDOZA, MICHAEL G

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3761

DATE MAILED: 10/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,684

Applicant(s)

GROVE ET AL. *CW*

Examiner

Michael G. Mendoza

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the communications assembly must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 7, 9, 10, 11, 14, 15, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Oosten 5,078,130.

4. As to claim 1, Van Oosten et al. teach a modular helmet-mask assembly which comprises: (a) a helmet capable of enclosing the head of a user, the helmet comprising an impact resistant material; and (b) a face protection assembly, alternately attachable to the and detachable from a front part of the helmet, which face protection assembly comprises (i) a face protection shell comprising an impact resistant material; (ii) a vision port through the shell at the level of the eyes of a user; (iii) a flexible nosecup assembly

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with the shell, which nosecup assembly is position to engage the mouth and nose of a user, the nosecup comprising a breathe-through airflow assembly and a filter unit (see figures); (iv) a flexible face seal, disposed on an inner surface of the shell around the nose cup assemble and the vision port, which face seal is capable of engaging the face of a user (col. 2, lines 19-30); and (v) an adjustable head harness attached tat an surface of the shell or the face seal which is capable of engaging the back of a user's head to thereby adjustably secure the face seal and nosecup assembly to a user's face, and (c) either (i) or (ii): (i) a transparent, impact resistant lens fixed to the vision port at the level of the eyes of a user (see figures); (ii) a transparent, impact resistant lens rotatably attached at the front part of the helmet and positioned to alternately engage and disengage with the vision port of the shell at the level of the eyes of a user.

5. As to claim 3, Van Oosten et al. teach the modular helmet-mask assembly of claim 1 comprising a transparent, impact resistant lens fixed to the vision port at the level of the eyes of a user (see figures).

6. As to claim 7, Van Oosten et al. teach the modular helmet-mask assembly of claim 1 wherein the face seal and nosecup comprise an elastic material (col. 4, lines 47-51).

7. As to claim 9, Van Oosten et al. teach the modular helmet-mask assembly of claim 1 further comprising a port for connection a source of breathing oxygen to the nose cup (see figures).

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8. As to claim 10, Van Oosten et al. teach the modular helmet-mask assembly of claim 1 wherein the filter unit comprises a filter element comprising a material capable of filtering the chemical vapors and biological aerosols (col. 6, lines 6-7).

9. As to claim 11, Van Oosten et al. teach the modular helmet-mask assembly of claim 1 wherein the filter element comprises a carbon filter (col. 5, lines 61-62).

10. As to claim 14, Van Oosten et al. teach the modular helmet-mask assembly of claim 1 wherein the nosecup assembly further comprises a positive pressure filter blower device (col. 2, lines 47-54).

11. As to claim 15, Van Oosten et al. teach the modular helmet-mask assembly of claim 1 wherein the nosecup assembly further comprises a circulating filter blower device (col. 2, lines 47-54).

12. As to claim 17, Van Oosten et al. teach a method of protecting a user's face from chemical which comprises: (I) providing a modular helmet-mask assembly which comprises (a) a helmet capable of enclosing the head of a user, the helmet comprising an impact resistant material; and (b) a face protection assembly, alternately attachable to the and detachable from a front part of the helmet, which face protection assembly comprises (i) a face protection shell comprising an impact resistant material; (ii) a vision port through the shell at the level of the eyes of a user; (iii) a flexible nosecup assembly with the shell, which nosecup assembly is position to engage the mouth and nose of a user, the nosecup comprising a breathe-through airflow assembly and a filter unit (see figures); (iv) a flexible face seal, disposed on an inner surface of the shell around the nose cup assemble and the vision port, which face seal is capable of engaging the face

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of a user (col. 2, lines 19-30); and (v) an adjustable head harness attached to a surface of the shell or the face seal which is capable of engaging the back of a user's head to thereby adjustably secure the face seal and nosecup assembly to a user's face, and (c) either (i) or (ii): (i) a transparent, impact resistant lens fixed to the vision port at the level of the eyes of a user (see figures); (ii) a transparent, impact resistant lens rotatably attached at the front part of the helmet and positioned to alternately engage and disengage with the vision port of the shell at the level of the eyes of a user: (II) placing the face protection assembly onto a user's head such that the flexible face seal engages the user's face, and such that the nosecup assembly engages the user's mouth and nose; (III) adjusting the adjustable head harness such that the face seal and nosecup are secured to the user's face; (IV) placing the helmet onto the user's head such that the helmet encloses the user's head and attaching the helmet to the face protection assembly; and (V) adjusting the helmet to secure the helmet, face seal, and nosecup assembly to the user's head.

13. As to claim 19, Van Oosten et al. teaches the method of claim 17 wherein the modular helmet-mask assembly comprises a transparent, impact resistant lens fixed to the vision port at the level of the eyes of a user (see figures).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 2, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Oosten et al. in view of Stackhouse et al. 4,986,282.

16. As to claim 2, Van Oosten et al. teach the modular helmet-mask assembly of claim 1. It should be noted that Van Oosten et al. fail to teach the modular helmet-mask further comprising a position adjustable adjustment pad attached at a rear part of the helmet which engages the back of the user's head. However, Stackhouse et al. does teach a position adjustable adjustment pad attached at a rear part of the helmet which engages the back of the user's head. Therefore it would have been obvious to one of ordinary skill in the art to modify the helmet-mask of Van Oosten et al. to include the adjustment pad of Stackhouse et al. to accommodate the dimensions of any user's head.

17. As to claim 12, Van Oosten/Stackhouse teaches the modular helmet-mask assembly of claim 2 wherein the adjustable adjustment pad comprises a tightening adjustment knob or a tightening adjustment lever.

18. As to claim 18, Van Oosten/Stackhouse teaches the method of claim 17 wherein the modular helmet-mask assembly further comprises a position adjustable adjustment pad attached at a rear part of the helmet which engages the back of a user's head to thereby adjustably secure the face seal and nosecup assembly to a user's face, the method further comprising adjusting the adjustment pad such that the face seal and nosecup are secured to the user's face.

19. Claims 4, 6, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Oosten et al. in view of Sundahl 4,549,541.

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20. As to claim 4, Van Oosten et al. teaches the modular helmet-mask assembly of claim 1. It should be noted that Van Oosten et al. fails to teach the modular helmet-mask comprising a transparent, impact resistant lens rotatably attached at the front part of the helmet and positioned to alternately engage and disengage with the vision port of the shell at the level of the eyes of a user. However, Sundahl does teach a transparent, impact resistant lens rotatably attached at the front part of the helmet and positioned to alternately engage and disengage with the vision port of the shell at the level of the eyes of a user (col. 2, lines 66-68 and col. 3, lines 1-9). Therefore it would have been obvious to one of ordinary skill in the art to modify the helmet-mask of Van Oosten et al. to include the lens of Sundahl to provide dual protection during impact.

21. As to claim 6, Van Oosten/Sundahl teaches the modular helmet-mask assembly of claim 1 wherein the impact resistant lens comprises polycarbonate, polyurethane, or combinations thereof (col. 2, lines 66-68 and col. 3, lines 1-9).

22. As to claim 20, Van Oosten/Sundahl teaches the method of claim 17 wherein the modular helmet-mask assembly comprises a transparent, impact resistant lens rotatably attached at the front part of the helmet and positioned to alternately engage and disengage with the vision port of the shell at the level of the eyes of a user (col. 2, lines 66-68 and col. 3, lines 1-9).

23. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Oosten in view of Epperson et al. 6,279,172.

24. As to claim 5, Van Oosten et al. teaches the modular helmet-mask assembly of claim 1. It should be noted that Van Oosten et al. fails to specifically teach wherein the

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impact resistant shell material comprises graphite, fiberglass, or combinations thereof.

However, Epperson et al. do teach a helmet-mask assembly comprising graphite (col. 3, lines 28-29). Therefore it would have been obvious to one of ordinary skill in the art to modify the helmet-mask of Van Oosten et al. to use the graphite of Epperson et al. for its strong and lightweight properties.

25. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Oosten et al. in view of Bieback et al. 6,121,881.

26. As to claim 8, Van Oosten et al. teach the modular helmet-mask assembly of claim 1. It should be noted that Van Oosten et al. fails to teach the helmet-mask comprising a microphone, a speaker, a transmitter and a receiver integrated with the helmet-mask assembly. However, Bieback et al. do teach an assembly comprising a communications assembly comprising a microphone, a speaker, a transmitter and a receiver integrated with the assembly (col. 1, lines 50-61). Therefore it would have been obvious to one of ordinary skill in the art to modify the helmet-mask to allow the user to communicate both with each other and with personnel and automated systems outside of the area.

27. As to claim 8, Van Oosten/Bieback teaches the modular helmet-mask assembly of claim 1 wherein the face protection assembly further comprises an electronic display (col. 10, lines 11-13).

28. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Oosten et al. in view of Japuntich et al. 5,509,436.

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29. As to claim 13, Van Oosten et al. teach the modular helmet-mask assembly of claim 1. It should be noted that Van Oosten et al. fail to teach wherein the nosecup assembly further comprises a negative pressure filter assembly. However, Japuntich et al. do teach a negative pressure filter assembly (col. 4, lines 11-21). Therefore it would have been obvious to one of ordinary skill in the art to modify the helmet-mask of Van Oosten et al. to include the assembly of Japuntich et al. to create a net flow of cool, air into the mask.

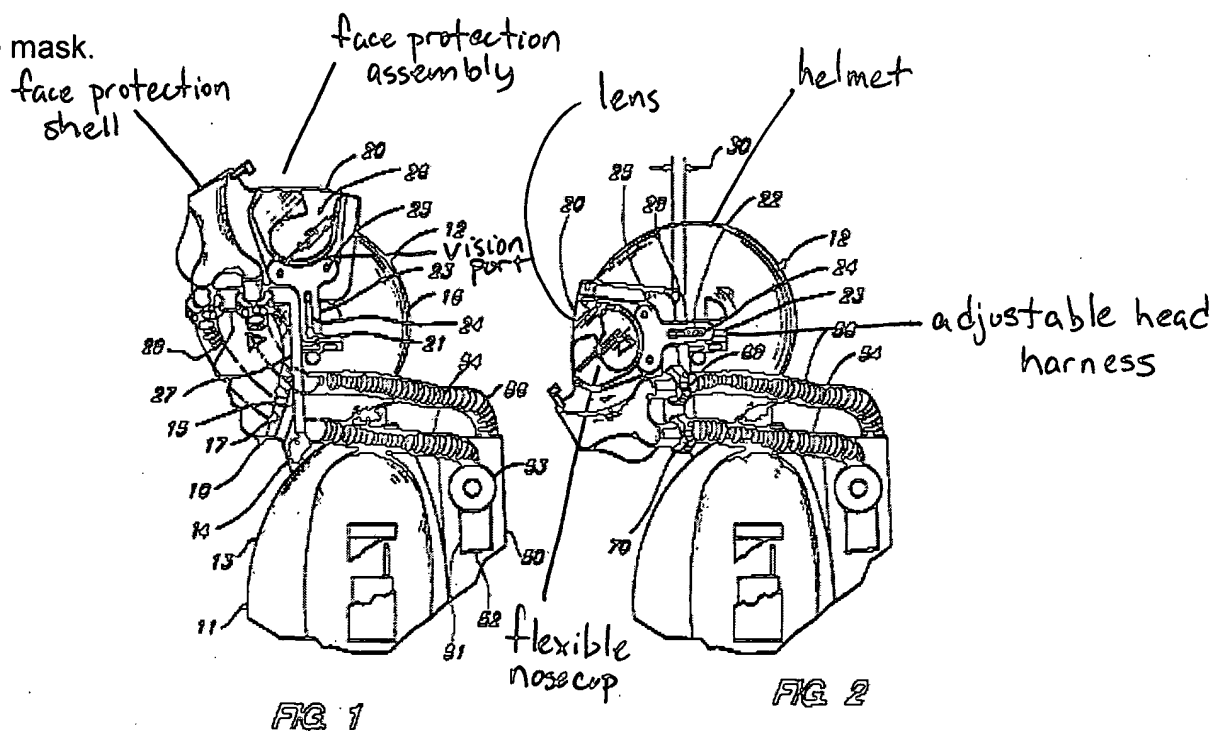
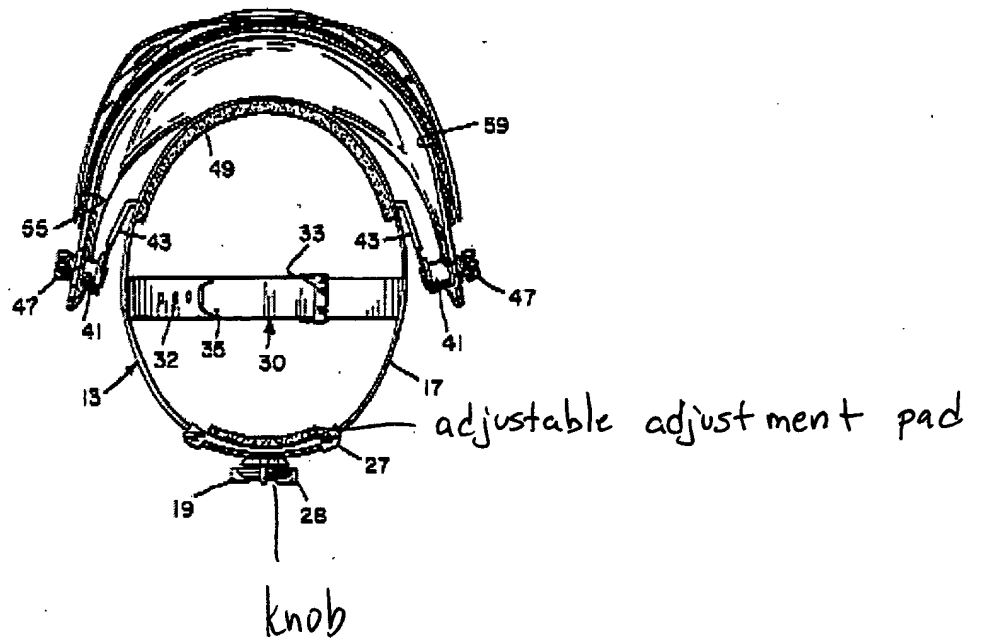


Fig. 4.



Contacts


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael G. Mendoza whose telephone number is (703) 305-3285. The examiner can normally be reached on Mon.-Fri. 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aaron Lewis can be reached on (703) 308-0716. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-4520 for regular communications and (703) 306-4520 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

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MM
October 2, 2002


Aaron J. Lewis
Primary Examiner